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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,732	03/02/2000	Kunio Imai	041514-5072	4972

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/517,732

Applicant(s)

IMAI, KUNIO

Examiner

Kevin Quarterman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-15 and 17-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-15 and 17-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on 20 December 2002.

These drawings are acceptable.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-5, 7-10, and 21-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsumura (US 5500537).
4. Regarding independent claims 1 and 21, Figure 7 of Tsumura shows an organic thin film switching element comprising an insulative film (13); an organic semiconductor layer (16) made of an organic semiconductor and mounded on the insulative film; a pair of opposing gate electrodes (12, 23) sandwiching the insulative film and the organic semiconductor layer; and a pair of intermediate electrodes (14, 15) disposed within the organic semiconductor layer.
5. Regarding claims 3-5 and 22-24, the organic semiconductor of Tsumura has a hole and electron transport property.
6. Regarding claims 7-10 and 25-28, Tsumura discloses the intermediate electrodes being made of a material having a work function to facilitate movements of

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holes and electrons between the electrodes and the organic semiconductor layer (col. 3, ln. 22-33).

7. The Examiner notes that the claimed functional properties of the organic semiconductor layer are not positive limitations but only requires the ability to perform the function. They do not constitute limitations in any patentable sense.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 11-15, 17-20, and 29-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's prior art (APA) Figures 1 and 2 in view of Tsumura, as applied to claims earlier in this action.

10. Regarding independent claims 11 and 29, prior art Figure 1 shows an organic electroluminescent element including a substrate (1) having a first display electrode (201), an organic layer (202) formed on the first display electrode, and a second display electrode (203) formed on the organic material layer. In regards to claims 13 and 31, applicant admits that a plurality of organic EL elements is arranged in a matrix (pg. 1, ln. 14-16). In regards to claims 14 and 32, APA Figure 2 shows a capacitor (C) formed on the substrate and connected to the first or second display electrodes. In regards to claims 15 and 33, applicant admits that the substrate and the first display electrode are transparent (pg. 1, ln. 18-20).

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11. Applicant's admitted prior art Figure 1 teaches the claimed invention except for an organic thin-film switching element having an organic semiconductor layer mounted on an insulative film being connected to the first or second electrode.

12. Tsumura, also regarding claims 17-20 and 34-37, teaches the organic thin-film switching element, as described above for claims 1, 3-5, and 7-10. Tsumura discloses that the organic film greatly improves the modulation of the source-drain current in an LCD (col. 5, ln. 54-56).

13. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the organic electroluminescent element of applicant's prior art Figure 1 with an organic thin-film switching element, as taught by Tsumura, for providing a highly efficient, high luminance, and longer life full color display.

Response to Arguments

14. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nonomura (US 4386352) discloses a matrix-type LCD. Aoki (US 4963503) discloses an LCD with gate film on semiconductor layer. Tanaka (US 6060333) discloses an LCD with FET. Ozawa (US 6194837) discloses a TFT and organic semiconductor film in a luminescent element.

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Contact Information

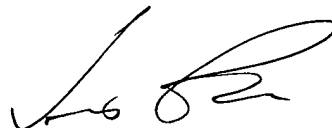
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (703) 308-6546. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kevin Quarterman
Examiner
Art Unit 2879

kq 
February 21, 2003



Vip Patel
Primary Examiner
Art Unit 2879